

IVANOVSKIY, A.B.

Taxonomic status and stratigraphic distribution of the genus
Paterophyllum Poeta. Trudy SNIGGIMS no.8:89-91 '60.
(MIRA 15:9)
(Bohemia--Corals, Fossil)

IVANOVSKIY, A.B.

New species of the genus *Dinophyllum* Lindström from Silurian in
the Siberian Platform. Trudy SNIGGIMS no.8:92-94 '60.
(MIRA 15:9)
(Siberian Platform—Corals, Fossil)

IVANOVSKIY, A.B.

Significance of rugosa for the Silurian stratigraphy of the
western part of the Siberian Platform. Trudy SNIIGGIMS no.10:
143-156 '60. (MIRA 15:12)
(Siberian platform—Rugosa)

IVANOVSKIY, A.B.

Phylogeny of the family Lykophyllidae Wedekind. Trudy SNIGGIMS
no.15:183-195 '61. (MIRA 15:9)
(Gotland--Corals, Fossils)

IVANOVSKIY, A.B.

Some Streptelasmata of the Middle and Upper Ordovician from
the Podkamennaya Tunguska Valley. Trudy SNIGGIMS no.15:197-
213 '61. (MIRA 15:9)
(Podkamennaya Tunguska Valley--Corals, Fossils)

IVANOVSKIY, A.B.

Devonian fauna in the Silurian of the Siberian Platform. Trudy
SNIIGGIMS no.23:120-125 '62. (MIRA 16:9)
(Siberian Platform—Tetracoralla)

IVANOVSKIY, A.B.

Two new species of Silurian Rugosa. Trudy SNIIGGIMS no.23:
125-133 '62. (MIRA 16:9)
(Tetracoralla)

SOKOLOV, B.S.; IVANOVSKIY, A.B.

In memory of Gleb Sergeevich Porfir'ev. Trudy VNIGRI no.196.
(MIRA 16:4)
Paleont.sbor. no.3:6-8 '62.
(Porfir'ev, Gleb Sergeevich, 1911-1959)

ZAPRUDSKAYA, M.A.; IVANOVSKIY, A.B.

Two new genera of Silurian Cystiphyllidae (rugosa) from the
Siberian Platform. Trudy VNIGRI no.196. Paleont, sbor. no.3:
48-57 '62. (MIRA 16:4)

(Siberian Platform—Rugosa)

IVANOVSKIY, A.B.

Use of Rugosa in the stratigraphic subdivision of the Ordovician and Silurian. Dokl.AN SSSR 145 no.6:1363-1365 Ag '62.

(MIRA 15:8)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya. Predstavleno akademikom A.L.Yanshinym.
(Corals, Fossil) (Geology, Stratigraphic)

MYAGKOVA, Ye.I.; NIKIFOROVA, O.I.; VYSOTSKIY, A.A.; IVANOVSKIY, A.B.; SOKOLOV, B.S., otv. red.; KOTLYAREVSKAYA, P.S., red.izd-va; GALUSHKO, Ya.A., red.izd-va; MATYUKHINA, L.I., tekhn. red.; YEGOROVA, N.F., tekhn. red.

[Stratigraphy of Ordovician and Silurian sediments in the Moyero Valley; Siberian Platform] Stratigrafiia ordovikskikh i siluriiskikh otlozhenii doliny reki Moiero; Sibirskaya platforma. Moskva, Izd-vo AN SSSR, 1963. 63 p.
(MIRA 16:12)

1. Vsesoyuznyy geologicheskii nauchno-issledovatel'skiy institut (for Vysootskiy, Nikiforova).
2. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR (for Myagkova).
3. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya (for Ivanovskiy).
(Moyero Valley—Geology, Stratigraphic)

IVANOVSKIY, Andrey Borisovich; SOKOLOV, B.S., otv. red.; IL'INA,
N.S., red.izd-va; LAUT, V.G., tekhn.red.; NGVICHKOVA,
N.D., tekhn. red.

[Ordovician and Silurian Rugosa in the Siberian Platform]
Rugozy ordovika i silura Sibirskoi platformy. Izd-vo AN
SSSR, 1963. 157 p. (MIRA 17:3)

IVANOVSKIY, A.B.

First Symposium on the Study of Fossil Corals in the U.S.S.R.
Geol. i geofiz. no.8:117-118 '63. (MIRA 16:10)

(Corals, Fossil)

ABUSHIK, A.F.; IVANOWSKIY, A.B.

Boundary between the Lower and Upper Silurian in the northern
part of the Siberian Platform. Dokl. AN SSSR 153 no.1:158-161
N '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii
institut i Institut geologii i geofiziki Sibirskogo otde-
leniya AN SSSR. Predstavleno akademikom A.A. Trofimukom.

IVANOVSKIY, Andrey Borisovich; SOKOLOV, S.S., otv. red.

[Very ancient Rugosa] Drevneishie rugozy. Moskva,
Nauka, 1965. 150 p. (MIRA 18:3)

SOKOLOV, B.S., otv. red.; IVANOVSKIY, A.B., otv. red.

[Transactions of the First All-Union Symposium on the
Study of Fossil Corals] Trudy I Vsesoyuznogo simpoziuma
po izucheniiu iskopaemykh korallov. Moskva, Nauka.
No.4. 1965. 45 p. (MIRA 18.11)

1. Vsesoyuznyy simpozium po izucheniyu iskopayemykh koral-
lov. 1st, Novosibirsk, 1963.

SOKOLOV, B.S., otv. red.; IVANOVSKIY, A.B., otv. red.; KALANTAROV,
A.P., red.

[Paleozoic Rugosa of the U.S.S.R.; transactions] Rugozy
paleozoya SSSR; trudy. Moskva, Nauka, No.3. 1965. 89 p.
(MIRA 19:1)

1. Vsesoyuznyy simpozium po izucheniyu iskopayemykh ko-
rallov SSSR, 1st.

BOGUSH, Oksana Ivanovna; GERASIMOV, Yevgeniy Konstantinovich;
YUFEREV, Oleg Vyacheslavovich. Prinimali uchastiye:
DUBATOLOV, V.N.; CHUDINOVA, I.I.; IVANOVSKIY, A.B.;
YELKIN, Ye.A.; CHERNYAK, G.Ye.; FURSENKO, A.V., otv. red.

[Lower Carboniferous of the lower Lena Valley] Nizhnii
karbon nizov'ev Leny. Moskva, Nauka, 1965. 64 p.
(MIKA 18:7)

1. Chlen-korrespondent AN Belorusskoy SSR (for Fursenko).

ALEXSEYEVA, R.Ye.; BETENTINA, O.A.; VOZZHENIKOVA, I.F.; GRATSIANOVA, R.T.;
DUBATOLOV, V.N.; YELKIN, Ye.A.; ZAKHAROV, V.A.; IVANKOVSKIY, A.B.;
SIDYACHENKO, A.I.; KUL'KOV, N.P.; MYAGKOVA, Ye.I.; OBIT, A.M.;
SANS, V.N.; TESAKOV, Yu.I.; FURSENKO, A.V.; KHOMENOVSKIY, V.V.;
YUFEREY, O.V.

Corresponding Member of the Academy of Sciences of the U.S.S.R.
Boris Sergeevich Sokolov; 1914 - ; on his 50th birthday. Geol.
i geofiz. no.8:140-147 '64 (MIRA 18:2)

1. IVANOVSKIY A.D., KOZENKO A.S.
2. USSR (600)
4. Snow
7. Snow cycle in the central forest-steppe zone. Gidr. i mel. 4 no.12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

1. KOZMENKO, A. S.; IVANOVSKIY, A. D.
2. USSR 600
4. Runoff
7. Surface runoff cycle in the central forest steppe zone, Oidr. i mel, 5, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

Country : USSR
Category : Cultivated Plants. General. M

Abs Jour : RZhBiol., No 6, 1959, No 24784

Auhtor : Ivanovskiy, A. I.
Inst : Agricultural Scientific-Research Institute
of the Far North.
Title : Development Characteristics and Variability
of Plants in the Far North.
Orig Pub : Tr. N.-i. in-ta s.-kh. Krayn. Severa, 1957,
5, 5-38

Abstract : A description of the vegetative period in tundra, tundra-and-forest and taiga zones, as well as data on experiments of cultivation of potatoes, vegetable, cereal and perennial plants are submitted. The development conditions of the plants in the Far North assist in the growth of their vegetative mass, thereby making it possible to obtain big harvests of potatoes, cabbage, root

Card : 1/2

IVANOVSKIY, A.I.

Scientific and practical recommendations for the cultivation of
field crops in the Far North. Probl. Sev. no.6:158-163 '62.
(MIRA 16:8)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva
Kraynego Severa Ministerstva sel'skogo khozyaystva RSFSR.
(Russia, Northern--Field crops)

Ivanovskiy, A.I.

USSR/General Division. History. Classics. Personalities. A-2

Abs Jour : Ref Zhur-Biologiya, No 2, 1958,4648

Author : D. D. Brezhnev, A. I. Ivanovskiy, T. V. Lizgunova and Others

Inst :
Title : In Memory of V. L. Vasil'yev

Orig Pub : Sad i ogorod, 1957, No 5, 75

Abstract : Obituary of Vasiliy Luk'yanovich Vasil'yev, one of the oldest vegetable growers in the country (1884-1957) who had worked on problems of vegetable growing, variety of vegetable crops and vegetable seeds. A number of works by Vasil'yev were devoted to problems on vegetable growing in the far North

Card 1/1

IVANOVSKIY, A.I.

Transformation of nature and ways of the development of agriculture
in the Far North. Probl. Sev. no.7:5-21 '63. (MIRA 17:2)

IVANOVSKIY, A.I.

Temperature of a nonequilibrium gas. Trudy TSAO no.46:3-15
'63. (MIRA 17:1)

IVANOVSKIY, A.I.

Investigation of flows caused by sound. Nauch. dokl. vys. shkoly;
fiz.-mat. nauki no.1:143-148 '58. (MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Sound waves) (Hydrodynamics)

AUTHOR: Ivanovskiy, A.I. 46-4-2-6/20

TITLE: On the Relationship Between Acoustic Streaming and Sound Absorption (O svyazi potokov vyzvannykh zvukom, s pogloshcheniyem zvuka)

PERIODICAL: Akusticheskiy Zhurnal, 1958, Vol IV, Nr 2, pp. 143-152 (USSR)

ABSTRACT: Hydrodynamics of acoustic streaming in liquids is discussed. The author proposes a method which makes it possible to obtain equations for acoustic streaming in various media. These equations are obtained for media which can be described by the Navier-Stokes equations, by relaxation hydrodynamics and by the theory of successive media. Frequency dependences of elastic and viscous constants in terms of succession function are obtained for the latter case. It is shown that the succession function can be obtained experimentally from the frequency dependences of elastic and viscous constants. The equations obtained show that acoustic streaming is present only when the total absorption coefficient is greater than zero. The frequency dependence of the stream velocity is determined entirely by the frequency dependence of this absorption coefficient. The paper is entirely theoretical.

Card 1/2

46-4-2-6/20

On the Relationship Between Acoustic Streaming and Sound Absorption

The author thanks E.G. Shvidkovskiy who directed this work.
There are 7 references, 4 of which are Soviet, 1 French,
1 German and 1 American.

ASSOCIATION: Kafedra molekulyarnoy fiziki Moskovskogo gosudarstvennogo
universiteta (Chair of Molecular Physics, Moscow State University)

SUBMITTED: July 8, 1957

Card 2/2 1. Underwater sound—Absorption 2. Hydrodynamics—Theory

IVANOVSKIY, A. I.: Master Phys-Math Sci (diss) -- "Theoretical and experimental study of currents caused by sound". Moscow, 1959. 7 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov, Phys Faculty), 150 copies (KL, No 17, 1959, 105)

PHASE I BOOK EXPLOITATION SOV/3390

Ivanovskiy, Andrey Ivanovich

Teoreticheskoye i eksperimental'noye izucheniye potokov, vyzvannykh zvukom (Theoretical and Experimental Study of Flows Caused By Sound) Moscow; Gidrometeoizdat, 1959. 114 p. 1,600 copies printed.

Sponsoring Agencies: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby. Tsentral'naya aerologicheskaya observatoriya.

Ed. (Title page): Ye.G. Shvidkovskiy; Ed. (Inside book): L.V. Blinnikov; Tech. Ed.: I.M. Zarkh.

PURPOSE: This monograph is intended for researchers and engineers interested in nonlinear acoustics.

COVERAGE: This is a study of flows caused by sound waves and nonlinear acoustic effects. The author analyzes Eckart's method and formulas and points out the following shortcomings: 1. sound is assumed to be adiabatic; 2. the nonlinear properties of media are taken into account only in the equation of motion and continuity;

Card 1/5

Theoretical and Experimental (Cont.)

SOV/3390

3. the equation system of first approximation is applicable only to the propagation of sound in a stationary medium; 4. Eckart's equation for flows contains only the local velocity derivative in time; 5. relaxation effects are not taken into account. The author presents his own method and includes a verification of derived formulas. The author attempts to explain the vertical movement of the air in the stratosphere by quartz wind effects and points out that the methods and results obtained in the present work can be applied to studies of density and temperature fluctuations in plasma. He also states that this method was used in studying streams caused by so-called Alfvén waves in magnetic hydrodynamics and that it can also be applied to thermal waves. The theoretical study of nonlinear effects is based on the theory of hereditary media; thus results can be applied also to molecular physics and to the theory of solids. The author previously worked at the Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory) but the present study is based on work done at the Physics Department of Moscow University. He thanks Ye.G. Shvidkovskiy, Doctor of Physical and Mathematical Sciences, I.P. Mazin, Candidate of Physical and Mathematical Sciences, and G.A. Kokin, Candidate of Physical and Mathematical Sciences.

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Theoretical and Experimental (Cont.)

SOV/3390

There are 71 references, 31 Soviet, 26 English, 7 French, 5 Italian; and 2 German.

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Theoretical and Experimental (Cont.)

SOV/3390

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Theoretical and Experimental (Con.)

SOV/3390

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AVAILABLE: Library of Congress

Card 5/5

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6-16-60

Yozhnyy Vozdukh (Gidromekhanika i Dinamika Plazmy. Tret'ye Konferentsii po Voprosam Gidromekhaniki i Dinamiki Plazmy. 1958 g. (Problemy Gidromekhaniki i Dinamiki Plazmy. Tret'ye Konferentsii. Works of the Conference on Magnetohydrodynamics, Mags, 2-10 July 1958), Mags, 1959, 339 pp

The majority of the texts of the 55 conference reports and discussions of reports are presented in the source in abridged form. Previously published reports are included there as brief abstracts only. The material published there for the first time (abridged and unabridged) are as follows:

- "The Role of Magnetohydrodynamics and Plasma Dynamics in Certain Problems of Astrophysics," by D. A. Frank-Kamenetskiy, Moscow, pp 7-11
- "Magnetohydrodynamics and the Study of Variations of Cosmic Rays," by L. I. Dorman, Moscow, pp 11-14
- "Cosmic Ray Spectrum and Daily Role in Cosmic Ray Dynamics," by S. I. Syritskiy, Moscow, pp 15-19
- "The Influence of a Magnetic Field on the Stability of Flow of a Conducting Fluid," by Ye. P. Velikova, Moscow, pp 19-23
- "Some Problems of the Motion of a Rarefied Plasma in a Magnetic Field," by S. Z. Sagdeev, Moscow, pp 23-25
- "On Nonlinear Steady-State Solutions of a Rarefied Plasma in a Magnetic Field," by S. Z. Sagdeev, Moscow, pp 25-27
- "On One Criterion of Applicability of the Equations of Magnetohydrodynamics to a Plasma," by S. I. Syritskiy, Moscow, pp 27-29 (Discussion of the report by R. V. Polovin, Izv. AN, pp 71-72)
- "On the Possibility of Accelerating Charged Particles by Means of Shock Waves in a Magnetized Plasma," by L. I. Dorman and G. I. Pavlov, Moscow and Gorkiy, pp 29-31
- "On the Acceleration of Charged Particles During Potential Instabilities Discharges and During the Collision of Magnetized Clouds," by L. I. Dorman, Moscow, pp 31-33
- "The Influence of a Longitudinal Magnetic Field on the Temperature of the Electrons in a Plasma," by M. V. Kuvshinov, Mags, pp 33-35
- "Investigation of Certain Characteristics of a Plasma at Low and High Behind a Powerful Shock Wave," by S. S. Kuvshinov, Moscow, pp 35-37
- "Observation of Electrodynamic Contractions of an Arc With the Aid of an Electric-Optical Converter," by V. L. Zhukovskiy, A. P. Zhukovskiy, V. I. Savitskiy, and G. G. Zhukovskiy, Moscow, pp 37-39
- "On the Interaction of Weak Perturbations With Discontinuities and the Stability of Shock Waves in Magnetohydrodynamics," by V. M. Kuvshinov, Mags, pp 39-41
- "On the Stability of Shock Waves in Magnetohydrodynamics," by S. I. Syritskiy, Moscow, pp 41-43
- "On the Scattering of Electromagnetic Waves on Turbulent Fluctuations," by A. G. Sitenko and Yu. A. Izrael, Izv. AN, pp 43-45
- "On the Scattering of Magnetohydrodynamic Waves in a Plasma," by S. Z. Sagdeev, Moscow, pp 45-47
- "Simple Waves in Magnetohydrodynamics," by A. I. Akhiezer, G. I. Lyubarskiy, and A. V. Polovin, Izv. AN, pp 47-49
- "Two-Dimensional Problems of Magnetohydrodynamics," by G. S. Golitsin, Moscow, pp 49-51
- "On Wave-Induced Flows in Magnetohydrodynamics," by A. I. Akhiezer, Moscow, pp 51-53
- "Oscillations of an Infinite Gas Cylinder With Its Own Gravitation in a Magnetic Field," by I. M. Ivlevskiy, Moscow, pp 53-55
- "On Magnetic Boundary Layers and Electric Current Discharges in Moving Media," by V. S. Zhigilev, Moscow, pp 55-59

S/124/61/000/010/045/056
D251/D301

AUTHOR:

..vanovski, A.I. and Cheremisin, F.G.

TITLE:

On the possibility of approximate definition of the spectrum of atmospheric turbulence for a given aircraft probe

PERIODICAL:

Referativnyy zhurnal. Mekhanika, no. 10, 1961, 106, abstract 10 B719 (Tr. Tsentr. aerol. observ. 1959, no. 31, 18-21)

TEXT:

The work is based on the approximate equation of A.S. Dubov, describing the vibrations of an aircraft in horizontal flight

$$W_z = v_z + b\dot{v}_z \quad (1)$$

where W_z is the velocity of the vertical component of the wind, v_z is the vertical velocity of the center of gravity of the aircraft, \dot{v}_z is the vertical overload, measured by an accelerometer, b is some

Card 1/2

On the possibility...

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D251/D301

coefficient dependent on the coefficients of mass and velocity of the aircraft. From Eq. (1) it follows that the relationship between the spectral function of the acceleration of the aircraft and the spectrum of the vertical component of the wind is given by

$$\Phi(\omega) = \frac{\Psi(\omega)}{\omega^2} (1 + \omega^2 b^2)$$

where $\Phi(\omega)$ and $\Psi(\omega)$ are respectively the spectral characteristics of the vertical component of the wind and the acceleration of the center of gravity of the aircraft defined by the following form

$$\overline{W_z(t)W_z(t + \xi)} = \int \Phi(\omega) e^{i\omega\xi} d\omega$$

The turbulence is assumed to be isotropic. By such a form, according to the measurement of the value of $\Psi(\omega)$, the spectrum of turbulence may be calculated approximately. [Abstracter's note:
Complete translation]

Gard 2/2

10,1000

35741

S/124/62/000/003/009/052
D237/D301

AUTHORS: Ivanovskiy, A.I., and Repnev, A.I.

TITLE: Density distribution in an instrument during free molecular flow

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 25, abstract 3B125 (Tr. Tsentr. aerol. observ., 1960, no. 29, 51 - 65)

TEXT: It was assumed that distribution of molecular velocities is Maxwellian, the free-path of the molecules is much longer than the characteristic dimension of the instrument, that the gas is homogeneous and is collected by the instrument on the body moving with a high velocity, and that measurements are registered by a recorder mounted in the wall of the instrument. Under these assumptions based on the theory of rarefied gases, formulas are obtained for the density distribution of the collected mass of gas, at first for the simplest instrument in the form of a straight tube open at one end, then for a cavity of arbitrary shape with a known distribution of temperature, as a function of position on the walls of the cavity. f
Card 1/2

Density distribution in an ...

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D237/D301

ty; in particular, formulas are obtained for the density distribution of the molecules brought to the wall temperature, in the case of the cavity either stationary or moving w.r. to gas (Temperature of the cavity is assumed constant.) [Abstractor's note: Complete translation].

Card 2/2

J

13073

S/169/61/000/012/083/089
D228/D305

24.2120

AUTHOR:

Ivanovskiy, A. I.

TITLE:

Wave-induced flows in magnetic hydrodynamics

PERIODICAL:

Referativnyy zhurnal, Geofizika, no. 12, 1961,
13, abstract 12G81 (Tr. Tsentr. aerol. observ.,
1960, no. 29, 84-87)

TEXT: Certain correlations from the "acoustic wind" theory, i.e., the flow of liquid arising under the influence of high-frequency sound (if there are radiation pressure gradients), are extended to the field of magnetic hydrodynamics. Equations are derived for flows in the presence of an externally constant magnetic field H_0 on the assumption that the amplitude of the variations of the velocity is much smaller than the speed of the wave process. The results are attributed, finally, to the case of the propagation of magneto-hydrodynamic waves in the direction

Card 1/2

IVANOVSKIY, A.I.; MAZIN, I.P.

Turbulent coagulation and its role in the growth of cloud droplets.

Trudy TSAO no.35:21-35 '60.

(MIRA 13:11)

(Cloud physics)

S/169/63/000/003/006/042
D263/D307

AUTHORS: Alekseyev, P.P., Basyalovskiy, Ye.A., Biryukova, L.A.,
Golyshev, G.I., Ivanovskiy, A.I., Izakov, H.M.,
Kokin, G.A., Kurilova, Yu.V., Livshits, N.S., Petrov,
A.A., Rozhdestvenskiy, B.G., Solov'yev, N.V., Speran-
skiy, K.Ye., Khvostikov, I.A., Shvidkovskiy, Ye.G.
and Shcharba, I.A.

TITLE: Study of the upper layers of the atmosphere with the
aid of meteorological rockets

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1963, 20,
abstract 34166 (Tr. Vses. nauchn. Meteorol. sovesh-
chaniya. T.I.L., Gidrometeoizdat, 1962, 91-103)

TEXT: In the present review-type article the authors give
the results of studies carried out at Tsentralnaya aerologicheskaya
observatoriya (Central Aerological Observatory) on atmospheric sound-
ing with meteorological rockets. Measuring methods are described and

ing with meteorological rockets. Measuring methods and corrections are
the main points are given for obtaining such atmospheric character-

Card 1/2

S/169/63/000/003/006/042
D263/D307

Study of the upper layers ...

istics as pressure, temperature, and wind. Certain results are given: data of seasonal temperature variations at heights up to 50 km in the middle latitudes of the USSR and in polar regions, cases of sudden warming up, characterization of temperature distribution curves, a table characterizing the temperature inversion below the stratopause under the conditions of polar night, and data regarding the circulation in the upper atmospheric layers. Information is given on the constructed meridional sections of temperature fields and on the zonal component of the gradient wind. (25 references).

[Abstracter's note: Complete translation]

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EWI: 1 WFC(w)/BDS/ES(v)

AFFTC/ASD/ESD-3/APGC

Pe-1/Pi-4/Po-4/Eq-4

3n

S/2789/62/000/040/0005/0966

ACCESSION NR: AT3002098

AUTHOR: Ivanovskiy, A.I.

TITLE: Application of the gas kinetic equations to the study of properties of
the upper atmosphere

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 40, 1962,
5-66

TOPIC TAGS: Gas kinetic equation, Boltzmann gas kinetic equation, gas
mixture, upper atmosphere, effective temperature, kinetic temperature, physico-
chemical magnetohydrodynamics

ABSTRACT: This theoretical paper undertakes to develop a system of physico-
chemical hydrodynamics and magnetohydrodynamics equations, in which due con-
sideration is given to the multiplicity of physical and chemical processes occurring

13-moment approximation of H. Grad (Communications of pure and appl. math.)

Card 1/3

L 17978-63

ACCESSION NR: AT3002098

2

v. 2, no. 4, 1949, 331-407). The chemical reactions considered are monomolecular and bimolecular. The examples developed through the use of the system of equations bear an illustrative character and show, in particular, that the kinetic coefficients are directly dependent on the effective reaction cross section. The calculations relate only to a few typical reactions in gaseous mixture, and the properties of the equations obtained are not investigated; this is merely a first step leading to future advanced work. The analysis of the system of equations obtained here shows, for example, that the barometric equation is dependent on a certain effective temperature up to any altitude. An evaluation is given of the elevations up to which the effective temperature does not differ from the kinetic temperature, with due consideration of the ultraviolet solar radiation. This consideration shows the effect of solar radiation absorbed on the density distribution of the atmospheric air, the stability of the atmosphere, the molecular heat ex-

and thermal diffusion in a two-component gas (15 equations).
cepts on the consideration of chemical reactions in a system of elastic equations

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L 17978-63

ACCESSION NR: AT 3002098

(26 equations). 5. Formulation of the problem of the finding of the equations of the hydrodynamics of a gas exposed to a given field of photons (9 equations). 6. Calculation of supplementary terms in the equations of hydrodynamics arising from the extinction reaction (23 equations). 7. Calculation of supplementary terms in the equations of hydrodynamics arising from the reaction of spontaneous radiation of an excited molecule (12 equations). 8. Calculation of supplementary terms in the equations of hydrodynamics arising from the reaction of excitation of molecules by an external photon flux (10 equations). 9. The viscosity of an irradiated gas (29 equations). 10. The thermal conductivity of an irradiated gas (7 equations). 11. On the density distribution in the atmosphere (22 equations). 12. On the stability of the atmosphere with respect to elastic oscillations (21 equations). 13. Consideration of electromagnetic forces (13 equations).

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 30Apr63

ENCL: 00

SUB CODE: AI, AS

NO REF SOV: 004

OTHER: 011

L 17977-63

EWI(1)/BDS

AFPTC/ASD/ESD-3 BB

ACCESSION NR: AT3002099

S/2789/62/000/040/0067/0071

AUTHORS: Repnev, A. I.; Ivanovskiy, A. I.

TITLE: Evaluation of the effect of nonequilibrium conditions in the atmosphere
on the measurements of its structural parameters

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 40, 1962,
67-71

TOPIC TAGS: mass flow, free molecular flux, Maxwell distribution function,
atmospheric density measurement, high elevation atmospheric density, satel-

atmospheric density measurement, high elevation atmospheric
lite density measurement, sounding rocket density measurement

ABSTRACT: This theoretical paper calculates additional supplementary terms in the expression of the mass flux per unit areas in free molecular flow conditions by nonequilibrium additions to the Maxwellian distribution function. Assessments are made relative to the possible effect of such nonequilibrium conditions on density measurements. The paper is based on the premise that in the measurements of the density of the rarified air in the upper layers of the atmosphere the hypothesis that only a local Maxwellian velocity distribution of molecules exists does not apply. This is especially true, if the cavity of the measuring instrument in which

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ACCESSION NR: AT3002099

the density is to be determined is moving at a velocity much in excess of the speed of thermal motion of the molecules and the density in the cavity does not depend any longer on the velocity distribution function of the molecules of the atmosphere. The resulting calculations are applied to several practical cases: (1) A satellite on a circular orbit. Case (a) ram manometer; case (b) effusion manometer. These

radiative-energy balance at high elevations is substantially incomplete. Page 241
has 14 numbered equations and formulas.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 30Apr63

ENCL: 00

SUB CODE: AI, AS

NO REF SOV: 003

OTHER: 007

Cord 2/2

L 17934-63

EPA(b)/EWT(1)/BDS/ES(7)
APTC PD-4/Pe-4/PI-4/PC-4/Pq-4 3W

AEDC/AFPTC/ASD/ESD-3/AFMDC/

ACCESSION NR: AT3002100

S/2789/62/000/040/0072/0079

AUTHORS: Ivanovskiy, A.I., Repnev, A.I.

TITLE: Spatial distribution of mass, impulse, and energy fluxes behind a small aperture

SOURCE: Tsentrāl'naya aerologicheskaya observatoriya, Trudy, no. 40, 1962, 72-76

TOPIC TAGS: density measurement, rocket measurement atmospheric density,
mass flux manometer aperture, impulse flux manometer
aperture, energy flux manometer aperture

ABSTRACT: This theoretical paper deals with the measurement of the atmospheric density by means of manometers set up on a rocket and explores the problem that arises in determining the relationship of the

know the angular distribution of the mass fluxes behind a small aperture on which
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L 17994-63

ACCESSION NR: AT3002100

a stream of Maxwellian particles impinges. A further problem to be solved is that of the determination of the stresses experienced by a body passing through a rarefied gas, for example the walls of the same measuring cavity, under the impingement of the entering gas flow. This problem requires the calculation of the angular distribution of the impulse flux behind a small aperture. The problem of the determination of the equilibrium temperature of a moving body, in particular the walls of a measuring cavity, requires the calculation of the angular distribution of the energy fluxes behind a small aperture. Calculations made in the present

velocities. Orig. art. has 7 numbered equations and formulas, and 1 figure.

ASSOCIATION: None.

SUBMITTED: 00

DATE ACQ: 30Apr63

ENCL: 00

SUB CODE: AI, AS

NO REF SOV: 004

OTHER: 002

Card 2/2

Lunovskiy, A.I.

AID Nr. 981-3 3 June

CONFERENCE AT CENTRAL AEROLOGICAL OBSERVATORY (USSR)

Meteorologiya i gidrologiya, no. 3, 1983, 60. S/050/63/000/004/002/002

The following are among the reports presented at a recent session of the Scientific Council of the Central Aerological Observatory: 1) N. Z. Pinus -- an experimental investigation of the wind field at altitudes of 7 to 11 km, certain peculiarities of the mesostructure of the wind field, and the statistical characteristics of horizontal and vertical wind fluctuations in the jet stream zone in different regions of the European USSR and Siberia; 2) S. M. Shmeter -- the process of cumulonimbus cloud development and a proposed model of the structure of the fields of meteorological elements near the upper third of such clouds at different stages of development; 3) V. D. Reshetov -- the use of hydrodynamic equations for determining the interdependence of ageostrophic, nonstatic, and nonstationary atmospheric motions and a more

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AID Nr. 981-3 3 June

CONFERENCE AT CENTRAL AEROLOGICAL [Cont'd]

S/050/63/000/004/002/002

accurate form proposed for writing such equations; 4) I. F. Kvaratskheliya -- conditions for the formation of sharp changes of vertical wind shear in the upper half of the troposphere over the Transcaucasus; 5) A. I. Ivanovskiy and A. I. Repnev -- the hydrodynamics of the upper atmosphere, taking into account the chemical reactions occurring under solar influence; 6) V. V. Kostarev, A. M. Borovikov, and A. B. Shupyatskiy -- certain radar criteria for identifying the hail content of clouds and criteria for evaluating the effect of cloud modification; and 7) A. G. Gorelik -- certain results of radar investigations of the wind field at altitudes of 50 to 700 m. [ET]

Card 2/2

IVANOVSKIY, A.I.

Some problems in the interaction of a measuring cavity and
the flow of a rarefied gas. Izudy TBAO no. 56:49-76 1964
(MIRA 18:1)

IVANOVSKIY, A.I.

Problems related to the conduction capacity of cylindrical tubes
under conditions of free molecular flow. Trudy TSIAO no. 61:7-17
'65. (MIRA 18:7)

L 1882-66 FSS-2/EWT(1) GS/GH
ACCESSION NR: AT5023562

UR/0000/65/000/000/0056/0061

AUTHOR: Ivanovskiy, A. I. 72
44.55

TITLE: Aerodynamics of manometers and mass spectrometers in rockets and earth satellites

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 56-61

TOPIC TAGS: scientific rocket, geophysical instrument, scientific satellite, meteorological instrument, manometer, mass spectrometer
44.55.12 44.55.12

ABSTRACT: The author derives mathematical formulas to define the behavior of a stream of rarefied gas in the intake tubes in the manometers and mass spectrometers used in rockets and satellites. It is assumed that the gas in the atmosphere is Maxwellian, that a particle colliding with the wall acquires the wall temperature and is diffusely reflected with an accommodation coefficient of 1, and that the free path of a particle in the atmosphere is considerably longer than the instrument. All particles entering the tube are divided into two classes: 1) primary particles which have not once collided with the wall, and 2) secondary

Card 1/2

L 1882-66

ACCESSION NR: AT5023562

particles which have collided at least once with the wall and have acquired its temperature. An expression is derived for calculating the density of secondary particles at an arbitrary point and the flow of secondary particles through an arbitrary cross section. The problem is also solved for oxygen particles which interact with the walls and recombine into molecules. The results are given graphically. Orig. art. has: 7 figures, 8 formulas. [14]

ASSOCIATION: none

SUBMITTED: 02Sep65

ENCL: 00

SUB CODE: ES, ME

NO REF SOV: 004

OTHER: 003

ATD PRESS: 4111

Card 2/2

IVANOVSKIY, A.I.; REPNEV, A.I.; SHVIDKOVSKIY, Ye.G.

Calculation of additional terms in hydrodynamic equations
accounted for by photodissociation reactions and pair
recombination of atoms with emission of a photon. Trudy
TSAO no.46:16-33 '63. (MIRA 17:1)

IVANOVSKIY, A.I.; KOSTKO, O.K.; FEDYNSKIY, A.V.

Density distribution in various devices in free molecular
flow. Trudy TSAO no.46:50-62 '63. (MIRA 17:1)

IVANOVSKI, A. I.; REPNEV, A. I.

"On the interactions of instruments for measuring structural parameters of atmosphere with the flow of rarefied gas."

report submitted for 5th Intl Space Science Symp, Florence, 12-16 May 64.

Hydrometeorological Service of the USSR.

FUKS, I.M.; VALEYEVA, F.N.; POPKOVA, F.V.; VOLKOVA, L.P.; BELOGOLOVSKAYA, T.A.;
ROMASHKEVICH, I.K.; Primalni uchastiye: MOROZOVA, L.M.; DASHEVSKAYA,
S.I.; VAKHMINA, L.S.; KARAVAYEVA, G.V.; IVANOVSKIY, A.K.; ZHUKHINA,
G.Ye.; SOLOV'YEVA, G.M.; ANDRIYANOVA, M.V.; AKHMETOVA, V.M.;
NEMIROVSKAYA, M.Ye.; MUSORINA, L.S.; KALASHNIKOVA, Ye.I.; PESHKO,
A.P.; IVANOVA, N.V.; ALKESEYEVA, N.I.; SADOVNIKOVA, G.N.

Study on the possibility of reducing the diphtheria vaccine dose in
revaccination of 9 to 12 year-old schoolchildren. Zhur. mikrobiol.,
epid. i immun. 41 no.11;103-107 '65. (MIRA 18:5)

1. Ufimskiy institut vaktsin i syvorotok imeni Mechnikova.

BUDYLINA, V.V.; IVANOVSKIY, A.S.; ANISIMOVA, Ye.M.

Effect of antigen, production-time period and physiological state
of the producing horses on the quality of native antitoxic sera.
Vak. i syv. no.1:83-89 '53. (MIRA 18:8)

1. Stavropol'skiy Institut vaktsin i syvorotok.

IVANOVSKIY, A.S., kand.vet.nauk

Determination of certain blood factors in horses. Veterinarika
35 no.3:76-77 Mr '58. (MIRA 11:3)

1. Stavropol'skiy nauchno-issledovatel'skiy institut vaktsin i
syvorotok.
(Horses--Physiology) (Blood--Analysis and chemistry)

ACC NR

AP6032180

SOURCE CODE: UR/0056/66/000/010/0035/0039

57

AUTHOR: Pavlovskiy, G. I. (Candidate of technical sciences); Bratuta, E. G. (Engineer); Shatilov, S. P. (Engineer); Ivanovskiy, A. Yu. (Engineer)

ORG: Khar'kov Politechnical Institute imeni V. I. Lenin (Khar'kovskiy politekhnicheskii institut)

TITLE: Study of the discharge capacity of guide ²⁶vane cascades in the last stage of the K-500-240 KhTGZ turbine

SOURCE: Teploenergetika, no. 10, 1966, 35-39

TOPIC TAGS: guide vane, turbine, discharge capacity, cascade, discharge coefficient, subsonic flow, supersonic flow, wet steam/K-500-240 turbine

ABSTRACT: An experimental determination was made of the discharge coefficient of the flow of superheated and wet steam at the plane cascades of a guide vane at the last stage of a K-500-240 KhTGZ turbine at actual M and Re numbers. It was found that at subsonic flow rates the discharge coefficient decreases with an increase in the pitch/chord ratio, apparently as the result of the increasing difference between the actual and effective flow exit angles. At

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UDC: 621.165.533.6.001.5

• J. 09092-67

ACC NR: AP6032180

supersonic flow rates, the dependence of discharge capacity on the magnitude of the pitch/chord ratio was found to be rather weak, probably owing to the close agreement between the actual and effective flow exit angles. Orig. art. has: 5 figures. [Based on authors' abstract]

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 008/

MOLCHANOV, Nikolay Semenovich; IVANOVSKIY, B.D., red. [deceased]; GEMBITSKIY, Ye.V., red.; CHUNAYEVA, Z.V., tekhn. red.

[Treatment in the field; manual for students of medical institutions and for physicians] Voenno-polevaia terapiia; rukovodstvo dlia studentov medvuzov i vrachei. Leningrad, Gos. izd-vo med. lit-ry Medgiz, Leningr. otdnie, 1961. 234 p.

(MEDICINE, MILITARY—HANDBOOKS, MANUALS, ETC.)

(MIRA 14:7)

IVANOVSKIY, B.V.

Flotation of synthetic quartz-cassiterite mixtures with simultaneous additions of cupferron and alizarin. Izv. vys. ucheb. zav.; tsvet. met. 3 no. 5:25-29 '60. (MIRA 13:11)

1. Leningradskiy gornyy institut. Kafedra obshchey i fizicheskoy khimii.

(Flotation--Equipment and supplies)

IVANOVSKIY, B.V.

Preliminary evaluation of the flotation properties of some
organic complex-forming agents; analytical reagents. Zap.
LGI 42 no.3&51-54 '63. (MIRA 17:10)

IVANOVSKIY, D. I.

DECEASED

Microbiology

see ILC

IVANOVSKIY, B.M.

Without operating logs. Avtom., telem. i sviaz 3 no.9:38
S '59. (MIRA 13:2)

1. Starshiy revizor sluzhby signalizatsii i svyazi Yugo-
Zapadnoy dorogi.
(Telegraph)

L 24409-66 EWT(1)/ENA(h)/ETC(m)-6 WW

ACC NR: AP6006369

SOURCE CODE: UR/0413/66/000/002/0100/0100

AUTHORS: Chernoval, V. S.; Shcherba, N. U.; Frelin, N. V.; Dashevskiy, L. N.;
Kolyada, I. A.; Gudrit, Ye. R.; Fediv, V. A.; Ivanovskiy, E. N.; Mazur, P. A.;
Yaskevich, L. Ye. 55

ORG: none 13

TITLE: Streamline flow meter. ²⁵ Class 42, No. 178125 [announced by Gas Institute,
 AN UkrSSR (Institut gaza AN UkrSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, no. 2, 1966, 100

TOPIC TAGS: flow meter, streamline flow

ABSTRACT: This Author Certificate presents a streamline flow meter containing a sensing element in the form of a pivoted vane and jet rectifiers mounted in front of and behind the vane (see Fig. 1). To decrease vibrations, the pivoted vane has a bend in the side opposite the flow direction. A plate whose center of gravity is displaced toward the free end of the vane is hinged to the vane. There is also a bypass tube connecting the front and back of the vane. 2

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UDC: 532.574.27

L 24409-66
ACC NR: AP6006369



Fig. 1. 1 - pivoted vane;
2 - bend of vane; 3 - plate;
4 - bypass tube.

Orig. art. has: 1 diagram.

SUB CODE: 14/

SUBM DATE: 12Feb65

Card 2/2 *da*

ANTONOVA, L.G.; FIL'CHENKOVA, T.G.; IVANOVSKIY, E.P.; KRASIL'SHCHIKOV,
A.I. (Moscow)

Adsorption phenomena in the system hydrogen - carbonic acid - carbon
monoxide - water vapor. Part 2: Adsorption of carbon monoxide.
Zhur. fiz. khim. 34 no.12:2766-2771 D '60. (MIRA 14:1)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Carbon monoxide) (Electromotive force)
(Adsorption)

IVANOVSKIY, E.V., nauchnyy sotrudnik; NAZAROV, V.P., nauchnyy sotrudnik

Virus vaccine against African horse sickness. Veterinariia
40 no.10:70-72 0'63. (MIRA 17:5)

1. Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh
preparatov.

SEALENSKIY, Ye... .. Veter. nauk. YANITSKIY, I. V. mladshiy
nauchnyy sotrudnik

Sondyng Afrikan kor. tikness. Veterinarits 41, no. 10:29-32
6 fig. (MIRA 18:11)

I. Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh
preparatov.

PHASE I BOOK EXPLANATION 807/1921

Abdumalye nash SSSR. Institut Fizicheskoy Khimii

Problemy Kinetiki i Kataliza. [6] 10; Fizika i Khimicheskaya Kataliza (Problemy Kinetiki i Kataliza). [vol. 10; Physics and Physical Chemistry of Catalysis] Moscow, Izd-vo AN SSSR, 1960. 461 p. Errata ally inserted. 2,600 copies printed.

Eds.: B.Z. Roginsky, Corresponding Member of the Academy of Sciences USSR, and G.V. Kargin, Institute of Chemistry Ed. or Publishing House: A.L. Buzhitskiy, Tech. Ed.: G.A. Arak'yeva.

PURPOSE: This collection of articles is addressed to physicists and chemists and to the community of scientists in general interested in recent research on the physics and physical chemistry of catalysis.

CONTENTS: The articles in this collection were read at the conference on the Physics and Physical Chemistry of Catalysis organized by the Odesk Khimicheskikh and AN USSR (Section on Chemical Sciences, Academy of Sciences USSR) and by the Academic Council on the problem of "the scientific bases for the selection of catalysts. The conference was held at the Institut Fizicheskoy Khimii AN SSSR (Institute of Physical Chemistry of the AS USSR) in Moscow, March 20-21, 1960. Of the great volume of material presented at the conference, only papers not published elsewhere were included in this collection.

Kontselev, J. (Institute of Physical Chemistry, Prague). On the Theory of Chemisorption and of Surface States	34
Meloshitskiy, A.M., J. Berni, and J. Haber (Mining and Metallurgical Academy, Moscow). Investigation of Electric Conductivity of Semiconductor Catalysts	37
Kagan, Sh. M., and V.B. Zaslavskiy (Department of Physics of Moscow State University, Institute of Physical Chemistry AS USSR). Isotherms and Adsorption Heat in the Electrochemical Theory of Chemical Adsorption	38
Vol'manskoye, V.P., and V.B. Zaslavskiy (Institute of Physical Chemistry AS USSR). Effect of an External Electric Field on the Adsorptive Capacity of a Semiconductor	41
Kagan, Sh. M., and V.B. Zaslavskiy (Institute of Physical Chemistry AS USSR, Department of Physics of Moscow State University). Measurement of Surface Potential of a Semiconductor as a Method of Detecting the Various Charge States of Particles Adsorbed on it	42
Ponomarev, V.Ye., and G.E. Korotkiy (Moskovskiy Khimicheskotekhnicheskii Institut, Inst. Khim. i Tekhn. Khim. Khim. Tekhn. Institut Khim. i Tekhn. D.I. Mendeleev). Catalytic Activity of the Metal Oxides of the 4th Period in Relation to the Oxidation Reaction of Hydrogen	67
Leppin, R.P. (Institute of Physical Chemistry AS USSR). Nature of the Heterogeneity of the Active Surface of Semiconductor Catalysts	73
Chudakov, A.P., and R.P. Leppin (Institute of Physical Chemistry AS USSR). Regularities in the Mechanism of Chemical Adsorption and Catalysis Over Solid Solutions of Zinc Oxide	77
Butsurn, I.N., and R.P. Leppin (Institute of Physical Chemistry AS USSR). Investigation of Chemical Adsorption of Gases on Nickel Oxide and Its Solid Solutions	82
Korotkiy, G.E. Mechanism of Electron Exchange in the Photooxidation of Water Over Semiconductors	87
Jenilovskiy, R.I. (Institute of Physical Chemistry AS USSR). Study of the Surface Charge of Oxide Semiconductor Catalysts During Adsorption	93
Yakovlev, P.O., G.Ye. Brudskiy, T.A. Semakova, and E.G. Lyubimovskaya (Institute of Physical Chemistry AS USSR). Investigation of the Mechanism of the Nitrogen Industry). Investigation of Zinc, Curcumin, and Copper Oxide Base Catalyst for the Conversion of Carbon Monoxide	99
Belashchikov, A.M., V.A. Alimov, and A.A. Filin (Institute of Physical Chemistry of the AS USSR). Spectroscopic and Magnetochromic Investigation of Blended Transitionally Precipitated NiO - Al ₂ O ₃ Catalysts	95
Goryunov, B.A. [Physicochemical Institute of the AS USSR]. Type of Bond and Properties of Semiconductors of the Crystallochemical Group Diamond - Zinc Blende - Wurtzite	96

IVANOVSKIY, F. P.

Lead chromate pigments. V. N. SCHULTZ, F. P. IVANOVSKIY AND V. A. KLEVEN
J. Chem. Ind. (Moscow) 7, 700-72 (1950).—Experiments were made to det
the optimum conditions for manuf. of chrome-yellow and orange pigments. The addn
of H_2SO_4 to the reacting mixt. of $Pb(C_2H_3O_2)_2$ and $Na_2Cr_2O_7$ produces pigments of light
yellow shades. Neutral $PbCrO_4$ has a yellow orange color. The addn. of alkalis
changes the color of the pigments to orange and red. The covering power of lead
chromate pigments is increased with the decrease in its content of $PbSO_4$. With in-
crease in basicity of lead chromate the covering power increases to a max. and then
decreases. The particle size increases with the diminution of $PbSO_4$ in the product and
is increased with the decrease of the particle size of the pigments. Acid-reacting liquids
produce pigments of brighter tones. An excess of $Na_2Cr_2O_7$ produces pigments of higher
covering power and tinting strength, but the color is somewhat affected. A slight excess
of lead salts is recommended. Room temp. is recommended for the prepn. of light yel-
lows; 50° for medium yellows; and 100° for orange-colored pigments. The covering
power of the pigments diminishes with the increase of concn. of the reacting liquids,
although at high concns. the covering power increases somewhat. Efficient washing of
the ppt. improves the covering power and color of the pigments. Repeated washings
give a somewhat lower yield. The temp. of drying does not affect the physical prop-
ties of the pigments. The slower the addn. of reagents, the brighter is the tone. Pro-
longed mixing darkens the pigments. Darkening of lead chromate pigments is at-
tributed to crystal changes and increase in density of the layer of the pigments.
 $Pb(NO_3)_2$ and $Na_2Cr_2O_7$ produce the best yield of pigments possessing high qualities
with regard to brightness and covering power, resistance to light, etc. The darken-
ing and even change of color of lead chromate pigments under the influence of sunlight
and atm. is explained by the presence of free $AcOH$, which cannot be removed com-
pletely by washing. B. MOYAROV



COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX	
<p>IVANOYSKIY, F. P.</p> <p>New catalysts for the conversion of carbon monoxide. F. P. Ivanovskii, G. E. Braude and A. M. Panina, <i>J. Chem. Ind. (Moscow)</i> 1934, No. 2, 37-44.—Fe catalysts should be heated for 2 hrs. at 700° before use, to give them the greatest stability. Co catalysts are very active, but are mechanically weak. Addn. of MgO strengthens them, but lowers their activity. Siderite is a good catalyst, but it loses its activity on prolonged use. The loss may be prevented by addn. of 0.7% by wt. of $K_2Cr_2O_7$ to siderite which has been heated for 6 hrs. at 600-625°. Such a catalyst gives 04-0% conversion. Addn. of too much $K_2Cr_2O_7$ weakens the catalyst. H_2S lowers its activity. Titanomagnetite, Fe chromite and bauxite are unsatisfactory as catalysts.</p> <p>H. M. Leicester</p>		<p>ASR. SLA METALLURGICAL LITERATURE CLASSIFICATION</p>	

IVANOVSKIY, F. T.

B-I-P

Utilization of gases from nitric acid factories for preparation of nitrogen and nitrogen-hydrogen mixtures. F. IVANOVSKI, M. KOSCH, and R. KAMMERTZ (J. Chem. Ind. Russ., 1935, 12, 803-808).--The gas, containing N_2 95-97, O_2 2.5-3, and NO 0.2-0.6%, is passed, together with sufficient H_2 , to combine with the O_2 and reduce NO to N_2 and H_2O , through a fixed catalyst containing Ni 3 and Cu 2%, at 500-600°. The resulting gas contains $> 0.0025\%$ of NO and $0.0001-0.003\%$ of O_2 , and costs 2.5-5 times $<$ that obtained by the Linde process. The catalyst is stable provided that H compounds are excluded. R. T.

ADDITIONAL METALLURGICAL LITERATURE CLASSIFICATION

I. AUTHOR AND SUBJECT		PAPER TITLE AND PROPERTIES INDEX	
IVANOVSKY, E. F.			
<p>  </p>		<p>  </p>	
<p> The conversion of carbon monoxide in the presence of substances which unite with carbon dioxide. P. P. Ivanovskiy, E. D. Shorina and I. G. Dreltser. <i>J. Chem. Ind. (U. S. S. R.)</i> 14, 567-70(1937).—Dolomite can be used to absorb the CO₂ formed from CO and H₂O, and thus give pure H₂ for NH₃ synthesis. The best dolomite is nearest to CaCO₃.MgCO₃ in compn. Tech. details are worked out. Na ferrite is not satisfactory for this purpose. H. M. Leicester </p>			
<p> A19.55A METALLURGICAL LITERATURE CLASSIFICATION </p>			
<p> 1937-1940 </p>		<p> 1941-1945 </p>	
<p> 1946-1950 </p>		<p> 1951-1955 </p>	
<p> 1956-1960 </p>		<p> 1961-1965 </p>	
<p> 1966-1970 </p>		<p> 1971-1975 </p>	
<p> 1976-1980 </p>		<p> 1981-1985 </p>	
<p> 1986-1990 </p>		<p> 1991-1995 </p>	
<p> 1996-2000 </p>		<p> 2001-2005 </p>	
<p> 2006-2010 </p>		<p> 2011-2015 </p>	
<p> 2016-2020 </p>		<p> 2021-2025 </p>	
<p> 2026-2030 </p>		<p> 2031-2035 </p>	
<p> 2036-2040 </p>		<p> 2041-2045 </p>	
<p> 2046-2050 </p>		<p> 2051-2055 </p>	
<p> 2056-2060 </p>		<p> 2061-2065 </p>	
<p> 2066-2070 </p>		<p> 2071-2075 </p>	
<p> 2076-2080 </p>		<p> 2081-2085 </p>	
<p> 2086-2090 </p>		<p> 2091-2095 </p>	
<p> 2096-2100 </p>		<p> 2101-2105 </p>	
<p> 2106-2110 </p>		<p> 2111-2115 </p>	
<p> 2116-2120 </p>		<p> 2121-2125 </p>	
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IVANOVSKIY, F. P.

PROCESSING AND PREPARATION

18

— Low-temperature catalysts for the conversion of carbon monoxide. F. P. Ivanovskii and G. E. Braule. *J. Chem. Ind. (U. S. S. R.)* 13, 14-19(1937).—Catalysts deposited on grog are not strong enough for industrial use. The best catalysts are mixts. of about 35% CuO and 65% CoO contg. some $K_2Cr_2O_7$, fixed and reduced with H at 300°. Such catalysts are poisoned by H_2S .
H. M. Leicester

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

IVANOVSKIY, F. F. Cand. Tech. Sci.

Dissertation: "Studying the Process of Carbon-Monoxide Conversion Under Pressure."
Moscow Order of Lenin Chemicotechnological Institute D. I. Mendeleev, 14 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

USSR, Chemistry - Gas purification; Hydrogen sulfide

FD-2527

Card 1/1 Pub. 50 - 6/14

Authors : Ivanovskiy, F. P., Dontsova, V. A., Semenova, T. A.

Title : ~~Utilization of a by-product of the aluminum industry, red sludge,~~
Utilization of a by-product of the aluminum industry, red sludge,
in the purification of gases from hydrogen sulfide

Periodical : Khim. prom. No 4, 218-222, Jun 1955

Abstract : Investigated red sludge (mainly ferric oxide) from the Ural'sk Aluminum Plant as an agent for the purification of industrial gases from hydrogen sulfide and found that it is effective. Determined the conditions under which purification with red sludge should be carried out. Eight references; 3 USSR, 2 since 1940. One figure, one graph, 7 tables.

IYANOVSKIY, F.P.
USSR/Physical Chemistry, Kinetics, Combustion, Explosions,
Topochemistry, Catalysis.

B-9

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22437.

Author : F. P. Ivanovskiy, R. S. Kal'varskaya, G. S. Baskova, N. P.
Sokolova.

Inst : ~~Not given~~ Inst. Nitrogen Ind., Moscow.

Title : Study of the mechanism of catalytic hydrogenation of organic
sulfur compounds on an iron chromium catalyzer with the applic-
ation of marked atoms method. I. Study of carbon bisulfide and
thiophene mechanism of catalytic hydrogenation.

Orig Pub : Zh. fiz. Khimii, 1956, 30, No 8, 1860. (Res. angl).

Abstract : Reactions of carbon bisulfide hydrogenation (I) at 200° and
thiophene hydrogenation at 300° are studied on a Catalyzer
containing ~88% Fe₂O₃, ~8% Cr₂O₃, ~3.7% SO₄, ~1% MgO and
sulfidized with the aid of H₂S³⁵, before the start of the ex-
periment. The comparison of data on radioactivity of gaseous
reaction products with corresponding % of transformation brought
the authors to the conclusion that reactions (1) and (2) are
passing through 2 stages, through the formation of intermedi-
ate compounds with the catalyzer (FeS³⁵). In both reactions

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IVANOVSKIY, F.P.; KAL'VARSKAYA, R.S.; BESKOVA, G.S.; SOKOLOVA, N.P.

Tracer studies on the mechanism of the catalytic hydrogenation of organic sulfur compounds on an iron-chromium catalyst. Zhur. fiz. khim. 30 no.11:2555-2559 N '56. (MIRA 10:4)

1. Institut azotnoy promyshlennosti, Moskva.
(Sulfur organic compounds) (Hydration)

STRUNINA, A.V.; ZEL'VENSKIY, Ya.D., kand.khim.nauk; IVANOVSKIY, Y.P.,
kand.tekhn.nauk

Absorption of carbon disulfide by monoethanolamine solutions.
Trudy GIAP no.7:195-212 '57. (MIRA 12'9)
(Gas purification) (Carbon disulfide) (Ethanol)

IVANOVSKIY, F.P., kand. tekhn. nauk; BRAUDE, G.Ye.; SHIMENOVA, T.A.

Selection of catalysts and the conversion of carbon monoxide under increased pressure; preliminary report. Trudy GIAP no.8:76-88 '57.

(VIRA 12:9)

(Carbon monoxide) (Catalysts)

KORSH, M.P.: IVANOVSKIY, F.P.

Reactions of nitrous oxide with hydrogen sulfide over sulfide
catalysts. Zhur. prikl. khim. 31 no.7:980-986 J1 '58.

(MIRA 11:9)

(Hydrogen sulfide) (Nitrogen oxides)

5(4),5(1)

AUTHORS:

Shenderay, Ye.R., Zel'venskiy, Ya. D.,
Ivanovskiy, F. P.

SOV/64-59-4-13/27

TITLE:

Solubility of Carbon Dioxide in Methanol at Deep Temperature
Under Pressure (Rastvorimost' dnuokisi ugleroda v metanole pri
nizkoy temperature pod davleniyem)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 4, pp 50-53 (USSR)

ABSTRACT:

For the purpose of purifying the synthesis-gas of sulfur compounds and carbon dioxide (I), and of extracting the acetylene from combustion gases (Refs 1-4) a gas absorption in organic solution mediums at deep temperatures (-25 to -60°) and a pressure of from 10-30 atmospheres is used. Methanol (II) proved to be the best means of absorption of this kind (Ref 5). The determination results concerning the solubility of (I) in (II) at -26, -36, -45, and -60° under pressure are given. The determinations were made according to a static method in an arrangement (Fig 1) which is in principle similar to that of (Ref 8). The autoclave and the piezometer were mounted in a thermostat. The pressure was measured with a spring-manometer, and the temperature by means of a copper/Constantan-thermo-couple

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Solubility of Carbon Dioxide in Methanol at
Deep Temperature Under Pressure

SOV/64-59-4-13/27

via a potentiometer PPTN. The measuring results obtained (Table 1, Figs 2,3 Isotherms) show that the solubility of (I) in (II) at given conditions is very high, and that for instance, if the pressure is equal, at -45° 70 times more of (I) is dissolved in (II) than at $+25^{\circ}$ in water. With (I) concentrations under 20 mol% the solubility increases proportionally with the pressure. In this interval the molar concentration of (I) in the solution may be calculated by multiplying the corresponding pressure of (I) with a coefficient. The solution heat of (I) in (II) was calculated from the temperature function of solubility (4050 kcal/mol). The densities of concentrated (I)-solutions in (II) (Table 2) were determined, and it was found that the molar volume of the (I)-solution in (II) is an additive composition of the liquid (I) and (II) with a deviation up to 2%. There are 6 figures, 2 tables, and 9 references, 5 of which are Soviet.

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5(4)

SOV/76-33-2-28/45

AUTHORS:

Antonova, L. G., Ivanovskiy, F. F., Fil'chenkova, T. G.,
Krasil'shchikov, A. I.

TITLE:

Adsorption Phenomena in the System Hydrogen - Carbon Dioxide -
Carbon Monoxide - Water Vapor I (Adsorbtsionnyye yavleniya v
sisteme vodorod - uglekislota - okis' ugleroda -vodyanoy
par.I)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2,
pp 416 - 421 (USSR)

ABSTRACT:

The catalytic reaction of carbon monoxide with water vapor
yielding hydrogen and carbon dioxide has been often inves-
tigated (Refs 1-7). The present experiments concerning the
adsorption of these components were carried out according
to a somewhat modified method (Ref 8). No electrode polari-
zation was produced, but the potential of the internal
electrode was measured. The gas was adsorbed onto a porous
metal film which served as an electrode and which was
applied to glass. A metal film of silver maintained in an
air atmosphere served as the comparison electrode. The
reaction cell (Fig 1) was produced from a special glaseous

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Adsorption Phenomena in the System Hydrogen - Carbon
Dioxide - Carbon Monoxide - Water Vapor I

SOV/76-33-2-20/45

material conductive at higher temperatures and which was attached to the testing apparatus (Fig 2). Experiments on copper films showed (Fig 3) that at 300°C (potential ca - 1250 mv) an extension of the potential to positive values takes place with an increase in moisture. The hydrogen adsorption at 250°C (potential ca -1200 mv) (Fig 5) has a different character than at 300°C since the influence of the moisture exerts a stronger irreversible effect. The adsorption of CO₂ on copper occurs at 250°C with a potential of ca -500 mv (Fig 6). The adsorption of H₂ and CO₂ on cobalt films occurs similarly to that on the copper films (potential at 250°C ca - 1100 mv) (Figs 8-10). The experimental results show that the measurement of the potential of metallic films is an important method for investigating gas adsorption. There are 10 figures and 21 references, 12 of which are Soviet.

ASSOCIATION: Institut azotnoy promyshlennosti, Moskva (Institute of the
Nitrogen Industry, Moscow)

Card 2/3

Adsorption Phenomena in the System Hydrogen - Carbon
Dioxide - Carbon Monoxide - Water Vapor I

SOV/76-13-2-20/43

SUBMITTED: July 9, 1957

Card 3/3

KRASIL'SHCHIKOV, A.I.; ANTONOVA, L.G.; IVANOVSKIY, F.P.

Adsorption, ionization, and catalytic activation of gases on
metals. Kin.i kat. 1 no.2:212-220 J1-Ag '60. (MIRA 13:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut azotnoy
promyshlennosti.

(Adsorption)

(Catalysts)

(Ionization of gases)

S/195/60/001/002/007/010
B004/B067

AUTHORS: Semenova, T. A., Braude, G. Ye., ~~Ivanovskiy, F. P.~~
TITLE: Study of the Conductivity of Zinc, Chromium, and Copper
Oxide Catalysts Used for the Conversion of Carbon Monoxide

PERIODICAL: Kinetika i kataliz, 1960, Vol. 1, No. 2, pp. 282 - 286

TEXT: In Refs.1,2 the authors studied catalysts consisting of CuO, ZnO, and Cr₂O₃ with different ratios of the components. Since these catalysts are semiconductors, the authors studied their conductivity and the relation between conductivity and activity. Tablets were pressed from powders of these oxides. Their conductivity was measured in a vacuum of 10^{-5} - 10^{-6} mm Hg and in a mixture of CO and water vapor at temperatures between 150° and 400°C, at both increasing and decreasing temperature. The measurements were made with molybdenum probes whose circuit diagram is shown in Fig.2. A ППТБ-1 (PPTV-1) potentiometer and an АУ-М2 (ACh-M2) cathode voltmeter were used. The authors obtained easily reproducible results. With increasing temperature, the conductivity in the vacuum in-

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Study of the Conductivity of Zinc, Chromium, and Copper Oxide Catalysts Used for the Conversion of Carbon Monoxide S/195/60/001/002/007/010
B004/B067

creases. In the gas mixture, however, the conductivity is reduced to a constant value the more, the higher the copper content. As is shown in Fig.6, an inverse relation was observed between conductivity σ and specific activity K_{sp} which depends on the Cu content. There are 6 figures, 2 tables, and 3 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut azotnoy promyshlennosti, Moskva (Scientific Research Institute of the Nitrogen Industry, Moscow)

SUBMITTED: December 14, 1959

Legend to Fig.2: T: tube for conductivity measurement; R_x : tablet; K_1, K_2 : contacts; β_1, β_2 : probes; A: milli- or microammeter; V: cathode volt-meter; B: power source; a) gas inlet; b) gas outlet.

Legend to Fig.6: a) molar ratio $CuO/ZnO \cdot Cr_2O_3$; b) K_{sp}

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$ZnO \cdot Cr_2O_3$

85609

S/064/60/000/005/011/021/XX
B024/B070

17.1153

AUTHORS: Shenderov, Ye. R., Zel'venskiy, Ya. D., Ivanovskiy, F. P.

TITLE: The Solubility of Carbon Dioxide in Methyl Ethyl Ketone, Ethyl Acetate, and Toluene at Low Temperatures Under Pressure X

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 5, pp. 18 - 22

TEXT: As the process of purification and extraction of gases by means of absorption at low temperatures is becoming more and more important for industry, a study is made here of the solubility in different solvents. The solubility of carbon dioxide in methyl ethyl ketone, ethyl acetate, and toluene has been examined at -25, -35, and -45°C, and pressures up to 16 atm. The solutions were found to be almost ideal. It is found from the analysis of the experimental results that the equation of I. P. Krichevskiy (Ref.5) for dilute solutions of nonelectrolytes is valid for the systems studied only if the concentration of CO₂ is not more than 10-15 mole%. The equation is:

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